

Amendments to the Claims:

This listing of the claims will replace all prior versions and listings of claims in the application:

Listing of Claims:

1. (Currently amended) An isolated nucleic acid comprising a sequence that is at least 98% identical to SEQ ID NO:1, or a sequence that is complementary over the entire length of SEQ ID NO:1 ~~thereto~~, or a sequence that due to the degeneracy of the genetic code encodes an identical polypeptide product to that encoded by SEQ ID NO:1.

2. (Canceled)

3. (Canceled)

4. (Currently amended) The nucleic acid of claim 1 comprising a sequence that is at least 99% identical to SEQ ID NO:1, or a sequence that is complementary over the entire length of SEQ ID NO:1, ~~thereto~~ or a sequence that due to the degeneracy of the genetic code encodes an identical polypeptide product to that encoded by SEQ ID NO:1.

5. (Currently amended) The nucleic acid of claim 4 comprising a sequence that is identical to SEQ ID NO:1, or a sequence that is complementary over the entire length of SEQ ID NO:1, ~~thereto~~ or a sequence that due to the degeneracy of the genetic code encodes an identical polypeptide product to that encoded by SEQ ID NO:1.

6-10. (Canceled)

11. (Withdrawn) An isolated polypeptide comprising an amino acid sequence that is at least 60% similar to SEQ ID NO:2, SEQ ID NO:4, SEQ ID NO:5, SEQ ID NO:6 or SEQ ID NO:7.

12. (Withdrawn) The polypeptide of claim 11 comprising an amino acid sequence that is at least 70% similar to SEQ ID NO:2; SEQ ID NO:4, SEQ ID NO:5, SEQ ID NO:6 or SEQ ID NO:7.

13. (Withdrawn) The polypeptide of claim 12 comprising an amino acid sequence that is at least 80% similar to SEQ ID NO:2; SEQ ID NO:4, SEQ ID NO:5, SEQ ID NO:6 or SEQ ID NO:7.

14. (Withdrawn) The polypeptide of claim 13 comprising an amino acid sequence that is at least 90% similar to SEQ ID NO:2; SEQ ID NO:4, SEQ ID NO:5, SEQ ID NO:6 or SEQ ID NO:7.

15. (Withdrawn) The polypeptide of claim 14 comprising an amino acid sequence that is at least 95% similar to SEQ ID NO:2; SEQ ID NO:4, SEQ ID NO:5, SEQ ID NO:6 or SEQ ID NO:7.

16. (Withdrawn) The polypeptide of claim 15 comprising an amino acid sequence that is identical to SEQ ID NO:2; SEQ ID NO:4, SEQ ID NO:5, SEQ ID NO:6 or SEQ ID NO:7.

17. (Withdrawn) An isolated polypeptide comprising an amino acid sequence that is at least 90% identical to a sequence of at least 20 contiguous amino acid residues in a sequence selected from the group consisting of SEQ ID NO:2; SEQ ID NO:4, SEQ ID NO:5, SEQ ID NO:6 and SEQ ID NO:7.

18. (Withdrawn) The isolated polypeptide of claim 16 comprising a sequence that is identical to a sequence of at least 20 contiguous amino acid residues in a sequence selected from the group consisting of SEQ ID NO:2, SEQ ID NO:4 and SEQ ID NO:5.

19. (Withdrawn) A non-human mutant mammal having germ and/or somatic cells that carry at least one copy of an impaired HEPP gene.
20. (Withdrawn) The mammal of claim 18 that is heterozygous or homozygous for HEPP.
21. (Withdrawn) The mammal of claim 18 that is a mouse.
22. (Withdrawn) The mammal of claim 18 that has least one functional impairment selected from the group consisting of perturbed hematopoiesis, reduced bone marrow cells, and impairment or progressive loss of motor function (paralysis).
23. (Previously presented) The nucleic acid of claim 5 that is identical to SEQ ID NO:1.
24. (Currently amended) The nucleic acid of claim 5 that is complementary to SEQ ID NO:1 over the entire length of SEQ ID NO:1.
25. (Previously presented) The nucleic acid of claim 5 that due to the degeneracy of the genetic code encodes an identical polypeptide product to that encoded by SEQ ID NO:1.